

ABSTRACT

This paper is an evaluation of alternative methods for reducing the impact of systematic bias in subjective estimates for PERT statistical procedures. As such, it represents an application of behavioural research to the improvement of a popular management science tool. The first section defines functions for analyzing the impact of behavioural research on PERT statistical procedures. The manner in which bias patterns impact on expected project costs is discussed. The second section presents several alternative proposals for improving PERT statistical procedures. The third section compares several of the most relevant studies of subjective estimation behaviour and evaluates their implications. Behavioural research in a variety of settings has demonstrated the predominance of a bias pattern that is likely to contribute to cost overruns when the project is expected to be behind schedule and cost penalties when ahead of schedule. The stability of the most common pattern argues for the superiority of including an adjustment constant in PERT statistical procedures as against the use of project monitoring of estimation behaviour.